(19) World Intellectual Property Organization

International Bureau





(43) International Publication Date 13 January 2005 (13.01.2005)

(10) International Publication Number WO 2005/003170 A2

(51) International Patent Classification7:

C07K 16/00

(21) International Application Number:

PCT/GB2004/002870

(22) International Filing Date:

1 July 2004 (01.07.2004)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

0315450.7

1 July 2003 (01.07.2003)

- (71) Applicant (for all designated States except US): CELL-TECH R & D LIMITED [GB/GB]; 208 Bath Road, Slough, Berkshire SL1 3WE (GB).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): HUMPHREYS, David, Paul [GB/GB]; Celltech R & D Limited, 208 Bath Road, Slough, Berkshire SL1 3WE (GB). HEYWOOD, Sam, Philip [GB/GB]; Celltech R & D Limited, 208 Bath Road, Slough, Berkshire SL1 3WE (GB). CARRING-TON, Bruce [GB/GB]; Celltech R & D Limited, 208 Bath Road, Slough, Berkshire SL1 3WE (GB).
- (74) Agent: THOMPSON, John; Celltech R & D Limited, 208 Bath Road, Slough, Berkshire SL1 3WE (GB).

- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GO, GW, ML, MR, NE, SN, TD, TG).

Published:

without international search report and to be republished upon receipt of that report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: MODIFIED ANTIBODY FRAGMENTS

(57) Abstract: The present invention provides an antibody Fab or Fab' fragment to which at least one effector molecule is attached characterized in that the heavy chain in the fragment is not covalently bonded to the light chain and both the interchain cysteine of C_L and the interchain cysteine of C_H1 have been replaced with another amino acid.

(19) World Intellectual Property Organization

International Bureau





(43) International Publication Date 13 January 2005 (13.01.2005)

PCT

(10) International Publication Number WO 2005/003170 A3

(51) International Patent Classification7:

A61K 47/48

(21) International Application Number:

PCT/GB2004/002870

(22) International Filing Date:

1 July 2004 (01.07.2004)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

0315450.7

1 July 2003 (01.07.2003) GB

- (71) Applicant (for all designated States except US): CELL-TECH R & D LIMITED [GB/GB]; 208 Bath Road, Slough, Berkshire SL1 3WE (GB).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): HUMPHREYS, David, Paul [GB/GB]; Celltech R & D Limited, 208 Bath Road, Slough, Berkshire SL1 3WE (GB). HEYWOOD, Sam, Philip [GB/GB]; Celltech R & D Limited, 208 Bath Road, Slough, Berkshire SL1 3WE (GB). CARRING-TON, Bruce [GB/GB]; Celltech R & D Limited, 208 Bath Road, Slough, Berkshire SL1 3WE (GB).

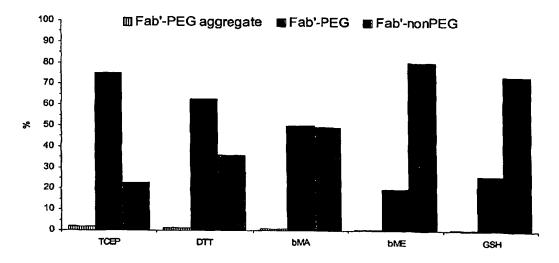
- (74) Agent: THOMPSON, John; Celltech R & D Limited, 208 Bath Road, Slough, Berkshire SL1 3WE (GB).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

[Continued on next page]

(54) Title: MODIFIED ANTIBODY FRAGMENTS



(57) Abstract: The present invention provides an antibody Fab or Fab' fragment to which at least one effector molecule is attached characterized in that the heavy chain in the fragment is not covalently bonded to the light chain and both the interchain cysteine of C_L and the interchain cysteine of C_H1 have been replaced with another amino acid.



WO 2005/003170 A3



(88) Date of publication of the international search report: 10 March 2005

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.